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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/612,511

07/02/2003

Artie J. Goldberg

UCON/204/US

3528

2543

7590

10/13/2005

ALIX YALE & RISTAS LLP

750 MAIN STREET

SUITE 1400

HARTFORD, CT 06103

EXAMINER

BUMGARNER, MELBA N

ART UNIT

PAPER NUMBER

3732

DATE MAILED: 10/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/612,511

Applicant(s)

GOLDBERG ET AL.

Examiner

Melba Bumgarner

Art Unit

3732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) 24-35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 12/5/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election with traverse of Group I, claims 1-23, in the reply filed on September 12, 2005 is acknowledged. The traversal is on the ground(s) that the examiner has not shown it would be a serious burden to perform a complete search. This is not found persuasive because a serious burden on the examiner may be prima facie shown if the examiner shows by appropriate explanation of separate classification, or separate status in the art, or a different field of search, which was stated in the restriction requirement of July 18, 2005. In response to the applicant, the method of invention II includes processing of the thermoplastic material of the orthodontic component that can be different from processing to make the product of invention I. Furthermore, the product of invention I does not require forming an orthodontic component precursor. The requirement is still deemed proper and is therefore made FINAL.

2. Claims 24-35 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on September 12, 2005.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 6-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear whether the wire is an element of the component or the wire is of the

Art Unit: 3732

polymer in claim 6. Recitation of “the non-rigid backbone polymer” in claim 7 and “the thermoplastic material” in claim 23 lack sufficient antecedent basis. In claim 8, it is unclear whether the component is in the neat resin form or property of thermoplastic polymer in the neat resin form stated as an intermediate product, in that the polymer further includes other material in dependent claims.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-8, 10, 12-14, 16, 17, 21, and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Goldberg et al. (4,717,341). Goldberg et al. disclose an orthodontic component comprising a rigid backbone polymer include a solubilizing side group (example 12). The process and the intermediate products used in the process by which the orthodontic component is made are not given patentable weight, because a product claim is properly met if the final product is shown regardless of the process used. The component comprises reinforcing fibers, filler, or non-rigid backbone polymer (column 5 line 15, column 7 line 15). The component comprises a wire having a shape providing a good fit in a bracket (column 4 line 16). Goldberg et al. disclose an orthodontic component comprising a thermoplastic polymer and patentable weight is not given to the intermediate products used in the process by which the component is made. It is noted that the mechanical properties of the intermediate product are claimed and not that of the final product. Goldberg et al. show final product having flexural modulus and flexural

strength exceeding (almost double in some examples) of the claimed tensile modulus and tensile strength of the neat resin form; although the tensile modulus and tensile strength of Goldberg et al. may test to be lower than the flexural modulus and flexural strength, it is believed that the claimed limitations would be met, if they were of the final product. The reinforcing agent comprises 5 percent by weight of the component. The wire has cross sectional shaped selected from a circle or polygon. The component comprises a bracket having a slot configured for wires. The component comprises a matrix of polymeric materials. The reinforcing material may comprise the thermoplastic polymer.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 9, 11, 19, and 20 are rejected as understood, under 35 U.S.C. 103(a) as being unpatentable over Goldberg et al. Goldberg et al. disclose an orthodontic component that shows the limitations as described above; however, they do not show the neat resin form having elastic deformation of at least about 30. It would have been an obvious matter of choice to one of ordinary skill in the art as to a property of an intermediate product and a value that appears to be a multiple of  $10^3$ . Goldberg et al. do not show the refractive index range of the component; however, it would have been an obvious matter of choice to one of ordinary skill in the art as to the refractive index in that Goldberg et al. teaches aesthetic components that are clear or tooth-colored. It would have been an obvious matter of choice to one of ordinary skill in the art in that

the specific value of hardness of the component as the hardness values in the specification are for the intermediate product, not that of the component, and they are not disclosed as critical to the claimed invention.

9. Claims 15 and 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Goldberg et al. in view of Wool (5,174,753). Goldberg et al. disclose an orthodontic component that shows the limitations as described above; however, they do not show the wire having cross section that is not circular and not quadrilateral. Wool teaches an orthodontic wire having such cross sections. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the wire of Goldberg et al. to have the cross section as in Wool in order to increase the flexibility and ease the insertion of the wire fitting into various slotted brackets. Goldberg et al. disclose an orthodontic component that shows the limitations as described above; however, they do not show the wire having different cross section at different points along its length. Wool teaches an orthodontic wire comprising different cross section at different points along its length. It would have been obvious to one having ordinary skill in the art to modify the wire of Goldberg et al. to have the cross section as in Wool in order to have the wire when in use insure rearward translation and prevent tipping of the anterior brackets, and reduce friction and the tendency of the wire to bind with the posterior brackets in view of Wool.

10. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Goldberg et al. in view of Barry et al. (6,267,590). Goldberg et al. disclose an orthodontic component that shows the limitations as described above; however, they do not show a coating over at least part of a core. Barry et al. teach an orthodontic component comprising a coating over a core. It would have been obvious to one having ordinary skill in the art at the time the invention was made to

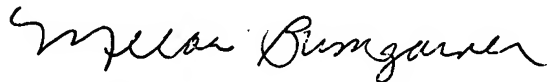
modify the component of Goldberg et al. with the coating of Barry et al. in order to provide antimicrobial protection in view of Barry et al.

*Conclusion*

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melba Bumgarner whose telephone number is 571-272-4709. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Shaver can be reached at 571-272-4720. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Melba Bumgarner  
Primary Examiner